

S/081/61/000/005/006/024  
B110/B205

AUTHORS: Gurvich, L. Ya., Khvoshchevskaya, K. A.

TITLE: Rapid method of determining the tendency of stainless steel to intercrystallite corrosion

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1961, 348, abstract 5N285 (5I285) ("Mezhkristallitn. korroziya i korroziya metallov v napryazh. sostoyanii." (Interocrystallite Corrosion and Corrosion of Metals in Stressed State) M., Mashgiz, 1960, 162-177)

TEXT: A rapid method is suggested for testing stainless steel for tendencies to interocrystallite corrosion in a solution of 20 %  $\text{HNO}_3$  + 1% NaF at about 20°C. [Abstracter's note: Complete translation.]

Card 1/1

DMITRIYEV, S.I., gornyy inzh.; MILOVANOV, I.B., gornyy inzh.; KHVOSHCHESKIY,  
N.M., gornyy inzh.

Using hydraulic mining methods and flexible roof support in the  
experimental working of the "Moshchnyi" seam in the "Ziminka" Mine  
no.3-4. Ugol' 35 no.9:6-9 S '60. (MIRA 13:10)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut i Vsesoyuznyy  
nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi  
uglya gidravlicheskim sposobom.  
(Kuznetsk Basin--Hydraulic mining) (Mine timbering)

ZHABIN, G.I., inzh.; KHVOSHCHESKIY, N.M., inzh.

Arched shields used for the hydraulic mining of thin, steeply pitching seams. Trudy VNIIGidrouglia no.2:19-27 '63.

(MIRA 17:6)

1. Sibirskiy metallurgicheskiy institut (for Zhabin).
2. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom (for Khvoshchevskiy).

TEODOROVICH, B.A., kand.tekhn.nauk; KHVOSHCHESKIY, N.M., inzh.;  
SAL'NIKOV, V.R., inzh.; ZAPREYEV, S.I., inzh.

Sublevel hydraulic coal breaking system with powered collapsible  
metal supports and their mechanized assembly in the erection area.  
Trudy VNIIGidrouglia no.1:25-32 '62. (MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy  
institut dobychi uglya gidravlicheskim sposobom (for Teodorovich,  
Khvoshchevskiy, Sal'nikov). 2. Kuznetskiy nauchno-issledovatel'skiy  
ugol'nyy institut (for Zapreyev).

KHVOSHCHESKIY, N.M.; LITVINENKO, A.S.

System of sublevel hydraulic breaking using flexible metal coverings in the "Koksovaya-1" Mine. Ugol' 40 no.1:24-27 Ja '65. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom (for Khvoshchevskiy). 2. Tröst Prokop'yevskugol' (for Litvinenko).

ELERT, G.K., gornyy inzh.; YAKOVLEV, Yu.P., gornyy inzh.; KHVOSHCHESKIY,  
N.M., gornyy inzh.; KOVALEV, V.M., gornyy inzh.

New blasting method for caving the roof in longwalls and layers.  
Ugol' 39 no.10:13-17 O '64. (MIRA 17:12)

1. VzryvPEU kombinata Kuzbassugol'.



L 9828-66 E.A(h)

ACC NR: AP6003970

SOURCE CODE: UR/0104/65/000/005/0093/0093

AUTHOR: Sarkisov, M. A.; Rokotyan, S. S.; Uspenskiy, B. S.; Sharov, A. N.;  
Zhulin, I. V.; Fedoseyev, A. M.; Korolev, M. A.; Kheyfita, M. E.; Yermolenko, V. M.;  
Petrov, S. Ya.; Azar'yev, D. I.; Krikunchik, A. D.; Polyakov, I. P.; Sazonov, V. I.;  
Khvoshchinskaya, Z. G.; Kartsev, V. L.; Smelyanskaya, R. Ya.; Kozhin, A. N.;  
Losev, S. B.; Dorodnova, T. N.; Rubinchik, V. A.; Smirnov, E. P.; Rudman, A. A.

ORG: none

TITLE: Abram Borisovich Chernin

SOURCE: Elektricheskiye stantsii, no. 5, 1965, 93

TOPIC TAGS: electric engineering, electric engineering personnel

ABSTRACT: An engineer since 1929, A. B. Chernin has worked for years in developing new techniques and equipment for relay protection of electric power systems. In this 60th birthday tribute, he is credited with leading the group which produced the directives on relay protection, contributing to the development of a method for calculating transient processes in long distance 400-500 kv power transmission lines and with aiding in planning of the electric portions of power stations, substations and power systems. The results of his engineering and scientific work have been published 46 times, he is a doctor of technical sciences (since 1963), and has taught for 30 years at the Moscow Power Institute. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09 / SUBM DATE: none

HW

50  
B



SOKOLOV, N.I., doktor tekhn.nauk (Moskva); GUREVICH, Yu.Ye., inzh.  
(Moskva); KHVOSHCHINSKAYA, Z.G., inzh. (Moskva)

Use of analog computers in studying the parallel operation of  
large turbogenerators. Elektrichestvo no.10:5-13 0 '63.  
(MIRA 16:11)

GUREVICH, Yu.Ye., inzh.; KHVOSHCHINSKAYA, Z.G., inzh.

Modeling of synchronous machines using electronic analog computers.  
Trudy VNIIE no.15:72-96 '63. (MIRA 16:12)

SOKOLOV, N.I., kand.tekhn.nauk, dotsent (Moskva); GUREVICH, Yu.Ye., inzh.  
(Moskva); KHVOSHCHINSKAYA, Z.G., inzh. (Moskva)

Use of analog computers for simulating a system with multiple  
generators. Elektrichestvo no.5:1-8 My '61. (MIRA 14:9)  
(Electric network analyzers)  
(Electric power distr'bution)

GUREVICH, Yu.Ye., inzh.; Khvoshchinskaya, Z.G., inzh.

Concerning an assumption in static stability calculations. Izv.  
vys. ucheb. zav.; energ. 7 no.3:1-9 Mr '64. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki (for Gurevich). 2. Moskovskiy ordena Lenina energeticheskiy institut (for Khvoshchinskaya).

KHVCHINSKIY, A.V.; KCHENISVEYG, V.S.

Mechanization and automation of the charging of slag-forming  
and alloying materials into electric furnaces. Stal' 25 no.8:  
813-818 S '65. (MIRA 18:9)

1. Gosudarstvennyy soyuznyy institut po proyektirovaniyu  
metallurgicheskikh zavodov.

BIRYUKOV, V.A., kand. tekhn. nauk; KHVOSHCHEVSKIY, M.I., inzh.

Practical testing of high-temperature lumber kilns made by  
the State Institute for Design and Planning Scientific Research  
Institute. Doc. prom. 13 no.12:22-1, D '64 (MIRA 18:2)

Khvoshchinskiy, N.V., inzh.; Gubina, N.I., inzh.

Engineering protection in the reservoir area. Energ.stroi. no.23:  
86-95 '61. (MIRA 15:1)

1. Ispolnyayushchiy obyazannosti glavnogo inzhenera stroitel'stva  
Kremenchugskoy gidroelektrostantsii (for Khvoshchinskiy). 2.  
Rukovoditel' gruppy proizvodstvenno-tekhnicheskogo otdeleniya  
stroitel'stva Kremenchugskoy gidroelektrostantsii (for Gubina).  
(Kremenchug Hydroelectric Power Station--Hydraulic structures)





L 5426-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AP5019771

UR/0051/65/019/002/0303/0306

539.184.26 : 546.36

56  
B

AUTHOR: Kallas, Kh.; Markova, G.; Khvostenko, G.; Chayka, M.

TITLE: Determination of the hyperfine structure constants of cesium from the crossing of magnetic sublevels

SOURCE: Optika i spektroskopiya, v. 19, no. 2, 1965, 303-306

TOPIC TAGS: cesium, hyperfine structure, spectral line, spectral energy distribution, Zeeman effect

ABSTRACT: This is a continuation of earlier work (Opt. i spektr. v. 17, 319, 1964) and is devoted to a more precise measurement of the magnetic fields for the crossing of the Zeeman sublevels of the  $7^3P_{1/2}$  state in cesium, and to similar measurements for the  $6^2P_{3/2}$  level. The magnetic field was produced by a pair of Helmholtz coils with constant  $C = 17.77 \pm 0.01$  Oe/amp, the coil axes being directed along the horizontal component of the earth's magnetic field. The vertical component was offset by supplementary coils. Three level crossings each were observed for  $7^3P_{1/2}$  and for  $6^2P_{3/2}$ . Expansion coefficients for the three level-crossing fields are calculated and tabulated. They agree with the published data for both  $7^3P_{1/2}$  and  $6^2P_{3/2}$ . Orig. art. has: 9 formulas and 1 table.

Card 1/2

070109/2

L 5426-66

ACCESSION NR: AP5019771

ASSOCIATION: none

SUBMITTED: 12Feb65

NR REF SOV: 002

ENCL: 00

OTHER: 001

SUB CODE: OP

*Ch*  
Card 2/2

*Khvostenko, G.I.*

AUTHORS	Ioffe, V.A., <u>Khvostenko, G.I.</u> , Zonn, Z.N.	57 - 9-10/40
TITLE	The Electrical Properties of Some Single Crystals and Polycrystalline Ferrites. (Elektricheskiye svoystva nekotorykh monokristallov i polikristallicheskikh ferritov.)	
PERIODICAL	Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 9, pp.1985-1995 (USSR)	
ABSTRACT	The dependence of the specific resistance, of the dielectricity constant, and of the angle of dielectric losses on temperature at sound frequencies and for solid solutions of nickel-ferrite and zinc-ferrite, of magnesium-ferrite and manganese-ferrite as well as in the case of two single crystals and a ceramic sample of a solid solution of cobalt-ferrite and zinc-ferrite was investigated. All ferrites investigated have a high dielectricity constant within the range of low frequencies and high temperatures. The dependence of the dielectricity constant on frequency and temperature is due to relaxation processes. It is shown that the dielectricity constant of ferrites is a property that is independent of their poly-	

CARD 1/2

AUTHORS: Ioffe, V. A., Khvostenko, G. I.

20-118-4-23/61

TITLE: The Anomalous Dispersion of the Dielectric Constant in Feldspars (Anomal'naya dispersiya dielektricheskoy pronitsayemosti v polevykh shpatakh)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 4, pp. 709-712 (USSR)

ABSTRACT: At first, the authors shortly report on the development of this problem. The present paper investigates the dielectric loss angle and the dielectric constant of potassium feldspar (orthoklase) and of sodium feldspar (albite) within the temperature range of from 20 to 500°K and within the range of frequencies of from 500 kilocycles to 5 Megacycles. The measurements were performed in vacuo, after the sample was heated to 500°K in an evacuated bell. The electrodes were applied by means of burning-in a silver paste. Measurements were conducted with a bridge circuit. A diagram illustrates the temperature dependence of  $\text{tg } \delta$  and  $\epsilon$  in orthoklase for frequencies of  $8.10^5$  and  $8.10^4$  cycles. The value of  $\text{tg } \delta$  is very small in orthoklase

Card 1/4

The Anomalous Dispersion of the Dielectric Constant in Feldspars 20-118-4-23/61

at temperatures of from 20 to 500°K ( $\sim 5 \cdot 10^{-4}$ ) and is little dependent upon temperature.- The dielectric constant retains its constant value of  $\epsilon = 6$ . From 200°K onwards  $\text{tg } \delta$  and  $\epsilon$  begin to increase sharply with growing temperature,  $\text{tg } \delta$  increasing by about two orders of magnitude. If the temperature is further raised,  $\text{tg } \delta$  remains constant. A sharp increase of  $\epsilon$  is also observed within the same temperature range. A second diagram illustrates the frequency dependence of  $\text{tg } \delta$  and  $\epsilon$  in orthoklase at the temperatures 297°K, 399°K and 246°K. The maximum of  $\text{tg } \delta$  at all three temperatures is found at the frequency  $\sim 4,5 \cdot 10^5$  cycles. The frequency of the maximum is independent from temperature. A second, wider maximum is observed at a frequency of  $2 \cdot 10^6$  cycles at a temperature of 297°K. Further numerical data are given. The dielectric constant decreases within the range of low frequencies at all temperatures investigated, when the frequency is increased, then passes through a maximum at the frequency of  $2 \cdot 10^5$  cycles, and through a low minimum at  $4,5 \cdot 10^5$  cycles. Then the dielectric constant increases again

Card 2/4

The Anomalous Dispersion of the Dielectric Constant in Feldspars 20-118-4-23/61

up to a value of  $\sim 6,3 \cdot 10^5$  cycles. A further diagram illustrates the temperature dependence of  $\text{tg } \delta$  and of  $\epsilon$  in albite at the frequencies  $8 \cdot 10^5$  and  $8 \cdot 10^4$  cycles. This temperature dependence shows the same character as in orthoklase. Similar dependences were also obtained by the authors for plagioklase, which consists of a solid solution of sodium- and potassium feldspars. An anomalous dispersion of  $\epsilon$  also exists in plagioklase, the range of dispersion, however, is somewhat lower, within the frequency range of  $\sim 10^5$  cycles. The here obtained temperature dependences of  $\text{tg } \delta$  and of  $\epsilon$  in feldspars can neither be explained by conduction processes, nor by relaxation processes. This also holds for the temperature dependence of  $\text{tg } \delta$ . Such a temperature dependence can obviously be explained by resonance phenomena. The resonance phenomena observed in feldspars are obviously caused by electron processes.

There are 4 figures, and 2 references, 1 of which is Soviet.

Card 3/4

The Anomalous Dispersion of the Dielectric Constant in Feldspars 20-118-4-23/61

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR  
(Institute for Silicate Chemistry, AS USSR)

PRESENTED: August 19, 1957, by A. F. Ioffe, Member of the Academy

SUBMITTED: August 16, 1957

AVAILABLE: Library of Congress

Card 4/4



Vitreous State (Cont.)	507/505
Armitage, P.W. Calculation of the Electric Field in Patterns of Special Charge Including Boundary Effects	251
Bozard, O.V. Dependence of the Critical Temperature of Solid Glasses on Composition	250
Khar'yakov, V.A., O.V. Bozard, and N.M. Zolotarev. Electrical Conductivity of Glasses of the $\text{LiF}-\text{AlF}_3-\text{CaF}_2$ System	253
Kostomarov, K.A. Study of the Relaxation Effect of Electrical Conductivity in Fused Boron Glasses	255
Yevseyev, K.M. Study of Diffusion of Gas Atoms in Silica Glasses with the Aid of Radioactive Isotopes	250
Ivanova, Ye.A. Diffusion of Copper Ions in Glasses Depending on Composition	254
Ioffe, V.A., G.I. Khvostov, and I.S. Yushmanov. Electrical Properties of Aluminosilicates	258
Card 12/22	
Vitreous State (Cont.)	507/505
Vasilevich, M.M., and V.S. Pavlov. See Alkali-Silicate-Containing Silicon Glasses of Crystalline Type	252
Oskolovskiy, V.I., and A.P. Kuznetsov. On the Problem of Rupturing the Nature of Residual Electrical Forces in Aluminosilicates	255
Bis'itskiy, B.P., and M.M. Shcheglov. Electrical Glass Properties	252
Petrovskiy, G.S. Electrical Properties of Soda-Borosilicate Glasses	300
Discussion	305
PHYSICOCHEMICAL PROPERTIES OF GLASSES	
Dependence of Properties on Composition	
Yevseyev, K.M. Influence of the Glasses Included in the Section Dealing With Inorganic Glasses on Properties of Glasses	307
Vitreous State (Cont.)	507/505
Shmidt, Ye.A. On the Dependence of Properties of Alkali-Silicate Glasses on Composition	310
Gladyshev, A.V., and V.S. Pavlov. Study of the Dependence of Structure of Inorganic Glasses	314
Melchikov, N.M. Dependence of Properties of Inorganic Glasses on Composition	318
Yevseyev, K.M. Dependence of Properties of Inorganic Glasses on Composition	315
Slovyanskii, V.I. On the Problem of the Activation Energy of Viscous Flow of Alkali-Silicate Glasses of Various Composition	313
Kind, N.Ye., and I.A. Yushmanov. Effect of Various Additives on Properties of Fused $\text{CaF}_2$ Glasses	311
Gryzlov, N.M. Study of the Properties of Aluminosilicate Glasses	315
Card 14/22	





81364

S/181/60/002/03/22/028  
B006/B017

15.2120  
24.7700

AUTHORS: Ioffe, V. A., Khvostenko, G. I.

TITLE: Electrical Conductivity of Sodium-aluminum-silicate Glasses

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 3, pp. 509-516

TEXT: The authors investigated the electrical conductivity of glasses of the system  $\text{Na}_2\text{O} \cdot x \text{Al}_2\text{O}_3 \cdot (y-x) \text{SiO}_2$  with  $y = 2, 3, 4$ , and 6 and  $x$  from 0 to 1.1. The aim of the present investigations was to find out whether a second type of charge carrier exists in these glasses (it has been assumed already earlier that the electrical properties of these glasses are not only determined by ionic but also by electronic processes). They also wanted to investigate the dependence of conductivity on the  $\text{Na}_2\text{O}$  content and the structure at very low temperatures and in the range 15 - 240°C. The composition of the glasses investigated is given in a Table (p. 510). Conductivity was measured electrometrically (Fig. 1), the apparatus made it possible to measure currents of down to  $10^{-14}\text{a}$ ; voltage sensitivity was  $10^{-3}\text{v/graduation}$ . All measurements were made in vacuum,

Card 1/3

81364

Electrical Conductivity of Sodium-aluminum-silicate Glasses

S/181/60/002/03/22/028  
H006/B017

after a continuous heating of the sample at 250°. Since the initial amperage could not be measured, the time dependences of "charge" and "discharge" of the sample were determined and then extrapolated for  $t = 0$  both graphically as well as by computation. Figs. 2 - 5 show  $\log \sigma = f(1/T)$  of four series of glasses. The following results were obtained: The electrical conductivity in the glasses investigated does not depend on the  $\text{Na}_2\text{O}$  content; it is determined by the ratio between the number of the aluminum-oxygen tetrahedra and the number of silicon-oxygen tetrahedra in the structural lattice, i.e., by  $\text{Al/Si}$ . With increasing  $\text{Al/Si}$ , electrical conductivity increases, whereas the activation energy  $U$  and the number of carriers decreases. The electrical conductivity of two glasses may be expressed by the formula  $\sigma = \sigma_0 \exp(-U_1/kT) + \sigma'_0 \exp(-U_2/kT)$  which

indicates that in these glasses two types of carrier exist. The authors assume that in the second type electrons are concerned. The resulting dependence of  $\sigma$ ,  $U$ , and  $\sigma_0$  on the composition (Figs. 7 - 10) may be explained by a change of the ratio of the fractions of ionic and electronic conduction in these glasses. N. M. Vereboychik and V. I. Odilevskiy are mentioned. There are 10 figures, 1 table, and 4 references:

Card 2/3

Electrical Conductivity of Sodium-aluminum-  
silicate Glasses

81361

S/181/60/002/03/22/028  
B006/B017

3 Soviet and 1 Swiss.

ASSOCIATION: Institut khimii silikatov AN SSSR Leningrad (Institute of  
Silicate Chemistry of the AS USSR, Leningrad)

SUBMITTED: June 4, 1959

Card 3/3

KHVOSTENKO, N.M.; CHZHAN VYE-GAN; ROGOVIN, Z.A.

New method of preparing cellulose materials possessing water-repellent properties. Zhur.prikl.khim. 34 no.3:656-659 Mr '61.  
(MIRA 14:5)

1. Moskovskiy tekstil'nyy institut.  
(Cellulose)

ROGOVIN, Z.A.; SUN' TUN [Sun' T'ung]; VIRNIK, A.D.; KHVOSTENKO, N.M.

Synthesis of new derivatives of cellulose and other polysaccharides.  
Part 19: Synthesis of cellulose graft copolymers and cartochain  
polymers without a simultaneous formation of homopolymers.  
Vysokom.soed. 4 no.4:571-576 Ap '62. (MIRA 15:5)

1. Moskovskiy tekstil'nyy institut,  
(Cellulose) (Polymerization)

Khvostenko, V. I.

AUTHORS: Khvostenko, V. I., Dukel'skiy, V. M., 56-4-4/54

TITLE: The Formation of Negative H-ions when Electrons Collide with Hydrogen Molecules (Obrazovaniye otritsatel'nykh ionov H-pri stolknoveniyakh elektronov s molekulami vodoroda)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4, pp. 851-855, (USSR)

ABSTRACT: The experiments were carried out with a mass spectrometer, where the stream of ions was measured by a multiplier. This latter had a multiplication factor of 1000 for H-ions of 1000 eV. Attention was paid to special purity of the H<sub>2</sub>-gas. A narrow maximum at 14,5 eV may be seen from the curve showing the dependence of the yield of H-ions on the energy of the electrons. This maximum is to be attributed to a resonance trapping of the electrons by the H<sub>2</sub>-molecules. The formation of H-ions at higher electron energies is probably to be traced to the fact that the H<sub>2</sub>-molecules are dissociated into positive and negative ions by the electron bombardment. There is 1 figure.

ASSOCIATION: Leningrad Physico-Technical Institute AN USSR (Leningradskiy fiziko-tekhnicheskii institut Akademii nauk SSSR)

SUBMITTED: April 23, 1957

AVAILABLE: Library of Congress  
Card 1/1

KVOSTENKO, V. I.  
KVOSTENKO, V. I. and DUKELSKIY, V. M. Prof.  
Leningrad Phys. Tech. Inst.

"Formation of Hydrogen Negative Ions on Collisions with Hydrogen Molecules,"

Paper presented by Dukelskiy at Conf. on Physics of Electronic & Atomic Collisions  
New York University, 27 -28 Jan 1958.

B - 3, 102, 929



AUTHORS: Khvostenko, V.I., Dukel'skiy, V.M. 56-34-4-50/50

TITLE: The Negative Ion  $H_2^-$  (Otritsatel'nyy ion  $H_2^-$ )

PERIODICALS: Zhurnal eksperimental'noy i teoreticheskoy fiziki  
1958, Vol. 34, Nr 4, pp. 1026 - 1027 (USSR)

ABSTRACT: As far as the authors know the negative ion  $H_2^-$  has  
as yet nowhere been observed. The authors tried to  
ascertain the existence of such ions, using the method  
of "Re-charging" for this purpose. Steam and antimony  
vapors were at the same time introduced into the ion  
source and were exposed to the action of an electron  
beam (0.3 milliamperes, 80 eV). The negative ions  
formed were analyzed by means of a mass spectrometer  
equipped with an electron multiplier tube. In the  
presence of steam in the ion source the ions  $H^-$ ,  $O^-$  and  $OH^-$   
were observed. In the subsequent introduction of antimony  
vapors to the source the ions  $Sb^-$ ,  $Sb_2^-$  and  $Sb_3^-$  addi-  
tionally occur as well as at the same time negative ions  
of the mass 2. In the spectrum of the ions maxima were

Card 1/2

The Negative Ion  $H_2^-$

56-34-4-50/60

determined which correspond to the mass numbers 0,5; 3 and 6. These maxima must be attributed to fraction-ions which were formed during the dissociation of the primary ions. The maxima corresponding to the mass numbers 0,5; 3 and 6 could be suppressed by applying a retarding potential of 1500 V to the first diode of the multiplier. The maxima corresponding to the masses 1 and 2 hardly varied at all and were obviously dependent on primary ions formed in the source. All observations tend to show that the observed negative ions of the mass 2 are  $H_2^-$ -ions. There are 4 references, 2 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Institute of Physics and Technology, AS USSR)

SUBMITTED: January 15, 1958

2. Ionospheric properties

Card 2/2

KHIVOSTENKO, V. I.: Master Phys-Math Sci (diss) -- "The formation of negative and positive ions in hydrogen". Leningrad, 1959. 10 pp (Acad Sci USSR, Phys-Tech Inst), 150 copies (KL, No 13, 1959, 100)

21(8),24(3)

AUTHORS: Khvostenko, V. I., Dukel'skiy, V. M. SOV/56-37-3-10/62

TITLE: The Formation of Negative Hydrogen Ions on the Surface of Incandescent Tungsten

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 3(9), pp 651-653 (USSR)

ABSTRACT: For the purpose of determining the electron affinity of the hydrogen atom, the authors investigated the production of  $\text{H}^-$  ions on an incandescent tungsten surface by means of an apparatus, which is shown schematically in figure 1. On the basis of quantum-mechanical calculations this value is given as 0.754 ev in reference 1. By using this value one obtains  $6 \cdot 10^{-9}$  for the probability of an  $\alpha$ -capture of an electron by a hydrogen atom which evaporates on a tungsten surface at 2400°K (work function of tungsten 4.5 ev). The  $\text{H}^-$ -ions may not only form on the cathode but also in the surrounding space 1) by electron impact, either from  $\text{H}_2$  or also from  $\text{H}_2\text{O}$ , 2) by radiation capture of slow electrons by hydrogen atoms; the latter are formed on the dissociation of hydrogen molecules on the incandescent tungsten surface. The authors have

Card 1/3

The Formation of Negative Hydrogen Ions on the  
Surface of Incandescent Tungsten

SOV/56-37-3-10/62

already shown (Ref 2) that process 1) does not take place, if the energy of the electrons is smaller than 5 ev. Figure 2 shows the measured dependence of the ratio  $I_{ion}/I_{el}$  on the temperature of the cathode within the range 2200-2900°K (hydrogen pressure  $2 \cdot 10^{-4}$  Hg,  $V = 3.0$  v). The  $H^-$ -ion current  $I_{ion}$  was of the order of magnitude  $10^{-16}$  a, the noise level was 10 to 20 times smaller ( $I_{el}$  denotes the electron current). The curve shows a maximum at about 2600°K. If  $\alpha \ll 1$ ,  $i_{ion} = \epsilon n_0 A \exp\{\epsilon(S - \varphi^*)/kT\}$  holds for the negative ion current density;  $n_0$  denotes the number of atoms evaporated by 1 cm<sup>2</sup> cathode surface per second.  $\epsilon\varphi^*$  is the effective work function for a polycrystalline surface.  $i_{el} = BT^2 \exp(-\epsilon\varphi_R/kT)$  holds for the electron current density. By making use of these formulas the electron affinity  $\epsilon S$  of the hydrogen atom may be calculated as amounting to  $(0.8 \pm 0.1)$  ev. There are 2 figures

Card 2/3

The Formation of Negative Hydrogen Ions on the  
Surface of Incandescent Tungsten

SOV/56-37-3-10/62

and 5 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk  
SSSR (Leningrad Physico-technical Institute of the Academy  
of Sciences, USSR)

SUBMITTED: April 13, 1959

Card 3/3

ACCESSION NR: AP4037571

S/0056/64/046/005/1605/1607

AUTHORS: Khvostenko, V. I.; Sultanov, A. Sh.

TITLE: Formation of negative aluminum, gallium, indium, and thallium ions by interaction between electrons and the halides of these elements

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1605-1607

TOPIC TAGS: negative ion, ion formation, halide, aluminum, gallium, indium, thallium, mass spectrometer, electron capture

ABSTRACT: The purpose of the investigation was to determine the feasibility of producing negative aluminum, gallium, indium, and thallium ions by interaction between the molecules of halides of these elements with electrons. A magnetic mass spectrometer was used to observe and identify the ions, which were recorded with an open electron multiplier. The negative gallium and indium ions were

Card 1/42

ACCESSION NR: AP4037571

observed for the first time. The negative ions of aluminum, indium, and thallium were produced by resonance capture of the electrons by the molecules, followed by the dissociation of the latter into negative ions and neutral halogen atoms, since they were observed only over a narrow range of electron energies (2--4.5 eV for aluminum, 0--3 eV for indium). The dependence of the negative ion yield on the electron energy was investigated in detail for thallium halides, and the production potentials of thallium ions and other positive and negative ions were carefully determined. The results will be published in a separate communication. "In conclusion, the authors thank Professor V. M. Dukel'skiy for suggesting the problem and directing the work." Orig. art. has: 1 figure.

ASSOCIATION: Institut organicheskoy khimii Bashkirskogo filial Akademii nauk SSSR (Institute of Organic Chemistry, Bashkir Branch, Academy of Sciences SSSR)

Card 2/42



~~1-37697-3~~     ~~EX(1)/PL(5)-DUC(V/A/R/E)~~     ~~EX(6)/PL(4)-DUC(V/A/R/E)~~

ACQUISITION 1998

6/0075/65/039/002/0475/0476

**August 11** - Great onco-therapy in the clinic

**TITLE:** Ionization of  $\text{TiCl}_4$ ,  $\text{TiBr}_4$  and  $\text{TiI}_4$  molecules by electron impact

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 2, 1965, 475-476.

**TOPIC TAGS:** salt ionization, thallium chloride, thallium bromide, thallium iodide  
electron-impact ionization, ion yield, electron bombardment, mass spectroscopy,  
dissociation energy

**ABSTRACT:** The ionization of thallium chloride, bromide and iodide by electron impact and the effect of electron energies on ion yields was determined by mass spectroscopy. The potentials for formation of positive and negative ions were measured and plots of electron energy vs. ion yields were presented (see Fig. 1 and 2 of the Enclosure). Dissociation energies for  $TlCl$ ,  $TlBr$  and  $TlI$  were calculated and the energy of electron affinity for  $Tl$  atoms was estimated as  $0.5 \pm 0.1$  ev. Negative  $Cl^-$  ions were shown to be formed by  $TlCl$  dissociation and also via formation of negative thallium chloride ions by electron capture.



Card 174

1 17697-65

ACCESSION NO. AP5006700

whereas negative thallium ions were formed only by the reaction



X being halogen. "The authors thank Prof. V. N. Dukel'skiy for his guidance."

0-15. Art. has 2 figures and 2 tables.

ASSOCIATION: Institut organicheskoy khimii, Bashkirekiy filial, Akademiya nauk  
SSSR (Institute of Organic Chemistry, Bashkir branch, Academy of Sciences, SSSR)

SUBMITTED: 06 JAN 64

FILED: 02

SUB CODE: II, NP

ED KEY SOV: 005

OTHER: 009

Card 2/4

KHVOSTENKO, V.V.; ADAMOV, E.V.

Interfactory schools for the exchange of progressive practices in the field of controlling technological processes in nonferrous metal ore dressing plants. TSvet.met. 35 no.2:79-80 F '62.  
(MIRA 15:2)

(Ore dressing—Study and teaching)

**KHVOSTENKOV, S.I., inzhener.**  
inventor of a new type of heat exchanger

New shape of a heat exchanger for a rotary kiln. Tsent 19 no.6:22-23  
N-D '53. (Kilns, Rotary) (Heat exchangers) (MLRA 6:12)

*Handwritten:* H. L. H. S. L.

Production of building brick from clay and lime. P. P.  
Bodolov and S. I. Khvostov, J. Appl. Chem. U.S.S.R., 24, 431-434 (1951) (translation).—See C.A. 45, 432a.  
H. L. H.

KHVOSTENKOV, S.I.

Jour. of the Amer.  
Ceramic Soc.  
Vol. 37 No. 3  
March 1954  
Cements, Limes, and  
Plasters

Study of conditions of formation of clay-lime structural materials. P. P. BUDNIKOV AND S. I. KHVOSTENKOV. *Zhur. Priklad. Khim.*, 26 [5] 457-63 (1953). Various clay-lime specimens were tested by chemical, thermographic, and mechanical methods before and after hydrothermal treatment to determine the effect of technological factors on hardening. Data (tabulated and graphical) are given on chemical composition, dehydration, strength as a function of the temperature of preliminary treatment of clay, strength as a function of steam pressure in the autoclave, strength vs. CaO content in mixtures, strength vs. pressure of shaping, and strength vs. degree of moistening. B.Z.K.

Khvostenkov, S. I.

Effect of grade of rotary furnace on dust carry-out. S. I. Khvostenkov. Technical 20, No. 6, 8-10 (1964).—Calculation made for various rotary furnaces. These indicate that, since greatest lifting force of gas stream is at 1000-1300° the burning zone is the chief center for dust carry-out. Furnace diam. should be of one size. B. L. Kamich

KHVOSTENKOV, S. (g.Kramatorsk); MORDUKHOVICH, M. (g.Kramatorsk); LAPOTNIKOV,  
V. (g.Kramatorsk).

Colored slate. Stroi.mat., izdel. i konstr. 2 no.2:16 F'56.

(MIRA 9:6)

1.Glavnyy inzhener tsementnogo zavoda (for Khvostenkov).2.Nachal'nik  
laboratorii (for Mordukhovich).3.Glavnyy inzhener Kramatorskogo  
shifernogo zavoda (for Lapotnikov).  
(Roofing, Slate)



*Khvostenko, S.I.*

✓ Study of conditions of formation of clay-lime structural materials. P. P. HUPNIKOV AND S. I. KHVOSTENKO. Translated in *Sovetsk. 6* (4) 161-63 (1955). For abstract see *Ceram. Abstr.*, 1954, March, p. 459. AS HA.

*Meth. 2*  
*pm*

KHVOSTENKOV, S.I., inzh.

Choosing the shape of a rotary kiln with regard to the problem of dust disposal. Nauch.sob.NIISementa no.7:25-30 '60. (MIRA 14:5)

1. Institut Sevkavgipromstom.  
(Kilns, Rotary) (Dust--Removal)

KHVOSTENKOV, S.I.

Reinforcing the lining of a rotary kiln. TSement 26 no.5: 29 S-O '60.  
(MIRA 13:10)

(Kilns, Rotary)

KHVOSTENKOV, S. I., Cand. Tech. Sci. (diss) "Investigation of Effect of Physical-chemical Properties of Raw Materials and Some Technological Factors on Dust-catcher of Rotating Cement-Roasting Ovens," Moscow, 1961, 19 pp. (Moscow Chem. Engr. Inst.) 18 copies) (KL Supp 12-61, 276).

KHVESTENKOV, S.I., inzh.; CHERNOBAYEVA, N.I., inzh.

Utilization of cement dust recovered by electric filters in  
the manufacture of silicate materials. Stroi.mat. 8 no.3:11-12  
Mr '62. (MIRA 15:8)

(Sand-lime products)

KHVOSTENKOV, S.I.

Strength of granules and briquettes made of cement raw material  
when heated. Trudy MKMTI no.36:144-147 '61. (MIRA 15:7)  
(Cement--Testing)

KHVOSTENKOV, S.I., inzh.

Changes in the physicochemical properties of cement raw material  
during heating. Nauch. soob. NII TSementa no.12:17-24 '61.  
(MIRA 15:7)

1. Novorossagiprotsement.  
(Cement—Testing)

KHVOSTENKOV, S.I.; CHERNOBAYEVA, N.I. SEMKIN, V.I.

Physicochemical properties and utilization of recovered dust.  
TSement 28 no.3:16-17 My-Je '82. (MIRA 15:7)

1. Novorossigiprotsement.  
(Dust)  
(Cement plants)



ANDROSOV, A.A.; KHVOSTENKOV, S.I.; CHERNOBAYEVA, N.I.

Adoption of an experimental industrial unit for burning  
clinker in a fluidizing bel. Sbor.trud. Novorossiyskprotsementa  
no.1:3-16 '61. (MIRA 16:2)  
(Cement plants)

KHVCSTENKOV, S.I.

Physicochemical properties of the raw material and choosing a  
method of producing cement. Sbor.trud. Novorossiyskprotsementa  
no.1:17-33 '61. (MIRA 16:2)  
(Cement plants)

KHVOSTENKOV, S.I.

Study of the chemism of the hardening of autoclaved clay-lime  
building materials. Sbor.trud. Nevorossigiprotsementa no.1:44-54  
'61. (MIRA 16:2)

(Building materials--Testing)

KHVOSTENKOV, S.I., kand. tekhn. nauk

Constant or variable profile of rotary kilns? TSement 30  
no.1:12-14 Ja-F '64. (MIRA 17:8)

1. Novorossiyskprotsement.

KHVOSTENKOV, Y. S. and FUDNIKOV, P. P.

"Investigation of Favorable Conditions for the Manufacture of Construction Material from Lime and Clay," translated into German in Silikattechnik, Vol. 6, No 4, p.161-2, 181, Apr 54.

OCHKUROV, V.G., KHVOSTIK, G.I.

The IS-2 feed-grinder. Trakt. 1 sel'khoz mash. 32 no. 7:27-28 JI '62.  
(MIRA 15:7)

(Feed grinders)

VERTSMAN, G.Z.; KHVOSTIK, I.F.

Plan for introducing new machinery in surveying railroad lines. Transp.stroi. 10 no.2:4-8 F '60.

(MIRA 13:5)

1. Rukovoditel' otdeleniya izyskaniy i proyektirovaniya Vsesoyuznogo nauchno-issledovatel'skogo instituta transportnogo stroitel'stva (for Vertsman). 2. Glavnyy inzhener Glavtransporoyekta (for Khvostik).

(Railroads--Surveying)

LYUTS, Aleksandr Fedorovich, prof.; SOROKIN, Vasilii Pavlovich, dots.;  
PINKOVSKAYA, Tamara Semenovna, dots.; KOKOVIKHIN, Mikhail  
Fedorovich, inzh.; KIRILENKO, Vasilii Sergeyevich, kand. tekhn.  
nauk; BELIKOV, Ye.F., dots., retsenzent; KHVOSTIK, I.F., red.;  
KOMAR'KOVA, L.M., red.izd-va; SUNGUROV, V.S., tekhn. red.

[Surveying in railroad engineering] Geodeziia v zheleznodorozh-  
nom dele; spravochnoe posobie. [By] Liutts, A.F. i dr. Moskva,  
Geodezizdat, 1962. 342 p. (MIRA 16:1)  
(Railroads—Surveying)



L 23951-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(1) IJP(o) JD/HW

ACC NR: AP6009820

SOURCE CODE: UR/0413/66/000/004/0011/0011

AUTHOR: Sukhorukov, N. A.; Lavrent'yev, V. M.; Khvostik, V. P.

ORG: none

TITLE: A method for stamping pipes. Class 7, No. 178778

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 11

TOPIC TAGS: pipe, metal stamping, metal pressing

ABSTRACT: This Author's Certificate introduces a method for stamping pipes on presses with a single container. The length of the stamping cycle is reduced by using a punch to remove the waste from the pipe at the end of the working stroke of the press. The waste is extracted from the container and cleaned from the punch on the reverse stroke.

SUB CODE: 13/

SUBM DATE: 05Nov62/

ORIG REF: 000/

OTH REF: 000

UDC: 621.774.381.7 : 621.774.38.073

1/1

L 23944-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(l) IJP(c) JD/HW

ACC NR: AP6009821

SOURCE CODE: UR/0413/66/000/004/0011/0011

AUTHOR: Sukhorukov, N. A.; Lavrent'yev, V. M.; Khvostik, V. P.

ORG: none

TITLE: A tool for stamping pipes, Class 7, No. 178779

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 11

TOPIC TAGS: die, metal stamping, pipe, metal pressing

ABSTRACT: This Author's Certificate introduces a tool for stamping pipes. The unit contains a die with a punch in the center. A stamping cycle is completed on one double stroke of the press. There is a hollow section in the leading end of the die which accommodates a catch on the punch. This catch is used for moving the punch and for cutting off the stamping waste. A section of this catch is turned down on a lathe for picking up the stamping waste on the punch to extract it from the container. The punch can be moved in the die so that there is a gap between the lower end of the tail section of the punch and the end of the hollow in the die where the punch is located. This makes it possible to shift the punch in the axial direction with respect to the die on the reverse stroke of the press so that a device for removing the stamping waste may enter the press between the catch on the punch and the die.

SUB CODE: 13/

SUBM DATE: 05Nov62/

ORIG REF: 000/

OTH REF: 000

UDC: 621.774.381.7 :

621.774.38.073

Cord 1/1

ALEKSANDROVICH, G.L., dotsent (Khabarovsk, ul. Kalinina, d.71, kv.19);  
KHOVOSTIKOV, G.F.

Repair of defects of the large intestine by the Nicoladoni-Reichel  
method. Nov.khir.arkh. no.5:89-93 S-0 '59. (MIRA 13:3)

1. Kafedra fakul'tetskoy khirurgii Khabarovskogo meditsinskogo  
instituta.

(INTESTINES--TRANSPLANTATION)

KHVOSTIKOV, G.Ye., inzh.; SEMENKOV, I.L., inzh.

Longwall timbering in connection with the operation of the UKR  
cutter loader. Ugol.prom. no.5:28-30 S-O '62. (MIRA 15:11)

1. Donetskij nauchno-issledovatel'skiy ugol'nyy institut.  
(Mine timbering)

157 AND 158 (1955) PROCESSES AND PROPERTIES INDEX

KHVOSTIKOV, I. A. 153

82

255. Fluorescence of Solutions of Platinocyanides. I. G. V. K. Khvostikov, *Comptes Rendus de l'Acad. des Sciences, U.R.S.S.* 4, pp. 14-20, Oct. 11, 1954. In German.—So far attempts to make solutions of platinocyanides fluorescence have failed, indicating that the fluorescence of the salt is due to impurities and is not an inherent property. The authors, however, have now obtained solutions of platinocyanides which show appreciable fluorescence. The aqueous solution of potassium platinocyanide shows a spectrum having 2 bands with maxima at 583 and 565  $\mu$ . The latter band is the same as one of the crystal bands. The absorption spectrum shows maxima at 284 and 279  $\mu$ . Measurements of the polarization of the fluorescence with various solvents give by use of the Perrin formula: a time for the life of the excited molecule as about  $3 \times 10^{-10}$  sec. Another estimate of this life was made by use of the theory of quenching by foreign substances. This gave  $1.6 \times 10^{-10}$  sec. A third method depending on the effect of foreign substances on the polarization gave a life of  $3.8 \times 10^{-10}$  sec. J. E.

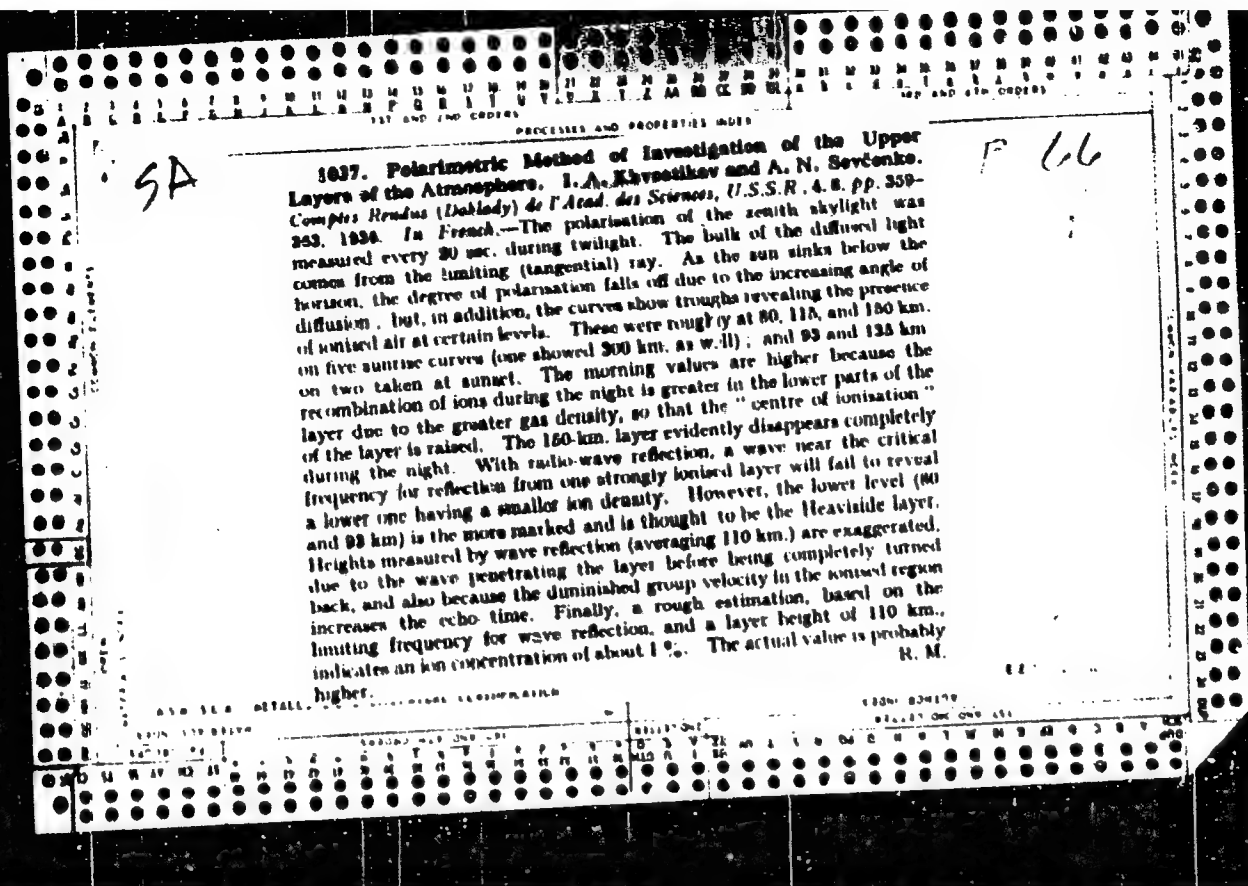
ASTM A4 METALLURGICAL LITERATURE CLASSIFICATION

BC

A-1

Intensity variation of the auroral green line in the night sky. A. A. LEBEDEV and I. A. CHYOSTI-KOV (Compt. rend. Acad. Sci. U.R.S.S., 1935, 1, 118-124).—During a night the intensity first rises sharply and then declines slowly, the max. intensity being 2-8 times > initial intensity and agreeing with Dobrotin *et al.* (see above). The emission of the green line is due to dissociation of  $O_2$  into O and the energy of the emission is the same as the energy of dissociation of mol.  $O_2$ . W. R. A.

ASS. S. A. METALLURGICAL LITERATURE CLASSIFICATION







1ST AND 2ND ORDERS																									
PROCESSING AND PROPERTY INDEX																									
<p>fluorescence of cyanoplatinite solutions. I. A. Khvostikov, <i>Trans. Optical Inst. Leningrad</i> 12, 141 (1953) [English 37 <i>STRUCTURE</i>, et. C. A. 30, 35-37]. The fluorescence is due to the <math>\text{Pt}(\text{CN})_4^{2-}</math> ion. The fluorescence may be quenched by foreign substances. The emission and absorption spectra are identical for all the cyanoplatinites. The abs. fluorescence yield was found to be 4.7%. For the active absorption band, the fulfillment of Einstein's law of const. quantum yield has been proved, thus the abs. yield of fluorescence varies inversely as the frequency of the exciting light. H. L. Seemann</p>																									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

155  
7

568. Diffuse Light from the Sky. I. A. Khvostikov. *Comptes Rendus (Doklady) de l'Acad. des Sciences, U.S.S.R.* 17. 4. pp. 195-197, 1937. In French.—Observations were made in the stratosphere at a height of from 8 to 10 km. The distribution of energy in the spectrum is measured. Comparison with the theoretical curve, calculated from Rayleigh's fourth power law for dispersion shows that the diffuse light of the atmosphere is richer in blue rays than this law requires; a law with an exponent  $n = 5.3$  in place of  $n = 4$  will fit the results. The degree of polarization for different wave-lengths is also measured. Experiments were made on the 9th and the 22nd of March and the differences observed are regarded as being due to the motion of the aerostat. The degree of polarization diminishes towards the blue end of the spectrum. An explanation, based on the existence of secondary diffusion, is put forward and discussed. G. G.

ASB 52.4 METALLURGICAL LITERATURE CLASSIFICATION

*CR*

An outline of the physics of the terrestrial atmosphere.  
I. A. Khramov: *Uspekhi Fiz. Nauk* 19, 49-73, 143-  
94(1953).—A review of the following problems: (1) struc-  
ture of the atm., (2) temp. of the upper stratosphere  
layers and (3) atm. ozone. Fifty-eight references.  
S. L. Madorsky

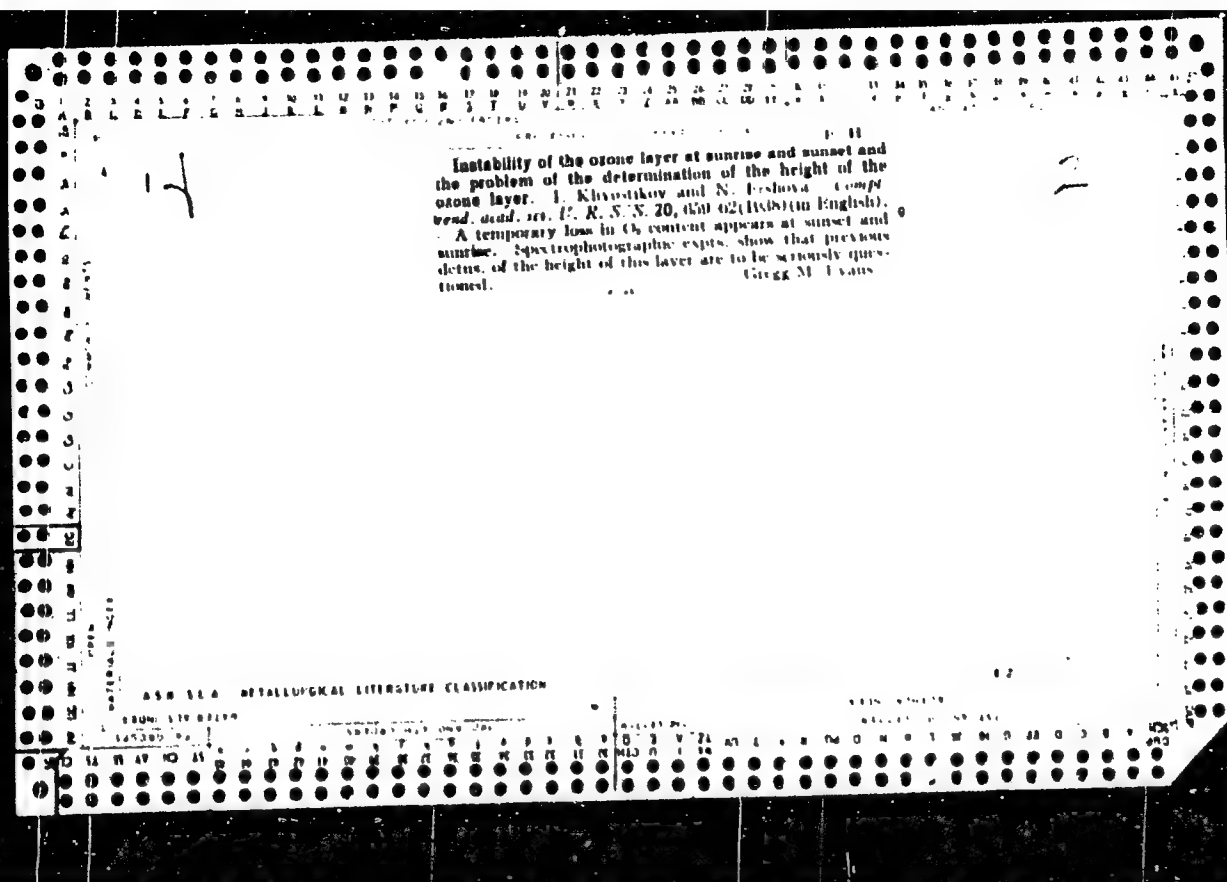
2

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

KHVOSTIKOV, I. A.

"Polarimetric Method of Studying the Structure of the Ionized Layers,"  
Usp. Fiz. Nauk, 19, No.2, pp. 183-93, 1938

Translation ATIC-242123  
F-TS-8854, III



KHVCSTIKOV, I. A.

Polyarizatsiya zelenoy linii svecheniya nochnogo neba (Polarization of the Green Line of the Night Sky Luminescence). Akademiya Nauk SSSR. Doklady, 1938, v. 21, no. 7, p. 326-329.

AS262.S3663 v. 21

KHVOSTIKOV, I. A.

"The Twilight Photoluminescence of the Earth's Atmosphere," Iz. Ak. Nauk SSSR,  
Ser. geograf. i geofiz., No.2, pp. 175-182, 1939

Inst. Theoretical Geophysics, AS USSR

Translation 563845

KHVOSTIKOV, I. A., YERSHOVA, N. D. and MIKHAYLIN, I. M.

"Measurements of the Brightness of the Green Line of the Night Sky," Iz. Ak.  
Nauk SSSR, Ser. geograf. i geofiz., No.2, pp. 217-21, 1939

Inst. Theoretical Geophysics, AS USSR

Translation 563844



131 AND 130 ORPRT  
PROCESSES AND PROPERTIES INDEX

2

Luminescence spectra of the night sky in the ultra-violet region. P. P. DOBRONRAVIN and I. A. CHYOSTIKOV (Compt. rend. Acad. Sci. U.R.S.S., 1939, 23, 233-237).—Solar short-wave spectra have been photographed for day, night, and twilight using a spectrograph fitted with a slit-reducing attachment. Three series of photographs have been obtained which show that the intensity of the ultra-violet light in the night-sky spectra is  $>$  those of day and twilight. This may be due to conditions favourable to the dispersion of short-wave solar radiation in the outer atm. layers.  
W. R. A.

ASB-514 DETAILURGICAL LITERATURE CLASSIFICATION

Trans. ATIC 235226

KHVOSTIKOV, I. A., E. N. MAGID and A. A. SHUBIN

Issledovaniye spektral'nogo sostava sumerechnogo sveta (Investigation of the Spectral Composition of Twilight Luminescence). Akademiya Nauk SSSR. Izvestiya. Seriya geogr. i geofiz., 1940, p. 675, tables, diags., 6 refs. Summary in German.

AS262.A6246 1940

KHVOSTIKOV, I. A., A. YA. DRIVING and PEVUNOVA, O. A.

Izmereniye spektral'noy prozrachnosti atmosfery v nochnykh usloviyakh (Investigation of the Spectral Transparency of the Atmosphere at Night). Akademiya Nauk SSSR. Izvestiya. Seriya geogr. i geofiz., 1940, no. 5, p. 685-690, diags., Summary in German.

AS262.A6246 1940

KHVOSTIKOV, Ivan Andreyevich

"Concerning the Relationship of the Anemolies of the Half-Day with the Conditions of the Ionosphere," Dok. AN, 26, No. 9, 1940.

B. Ab.

AT 2, Molecular It.

**Polarization of lines emitted in the spectrum of the night sky.**  
 I. A. Chyostikov (*Compt. rend. Acad. Sci. U.R.S.S.*, 1940, 27, 219-222).—The degree of polarization and orientation of the plane of polarization and their variation with time have been measured for the O<sub>2</sub> lines 5577 and 5300 Å. and the Na line 5890 Å. emitted by the night sky. All lines are polarized throughout the night, the degree of polarization varying between 9 and 17%. The orientation of the plane of polarization varies throughout the night, following the movement of the sun below the horizon. The emission of these lines may be due to photoluminescence excited by solar radiation of λλ close to the region of absorption by the atm., which may penetrate the lower layers of the atm. on account of its high refractive index for these λλ.  
 O. D. S.

Translation 568500

[illegible]

KHVOSTIKOV, I. A.

"Some Questions on the Optics of the Fogs," Iz. Ak. Nauk SSSR, Ser. Geograf. i. Geofiz., Nos. 1-6, 1942.

KHVOSTIKOV, I. A.

"Investigation of the Optical and Physical Properties of Natural Fog," A. Ya. Driving, A. V. Mironov, V. M. Morosov, and I. A. Khvostikov, Bull Acad. Sci., USSR, Ser Geograph and Geophys., 1943, 70-82;

Observations were made on the polarization of the light scattered by the mist at various angles and on the absorption of light in natural mists. The results do not agree with theoretical values. In order to explain the discrepancy between the observed and the theoretical values a hypothesis is advanced which assumes the presence of "submicroscopic" droplets in the mist or fog.

M.G.Moore



KHVOSTIKOV, I. A.

"Of the Investigation of Atmosphere with the Aid of a searchlight Ray," Iz. Ak.  
Nauk SSSR, Ser. Geograf. i Geofiz. No. 5-6, 1945.

Lab. of Atmospheric Optics, Inst. of Theoretical Geophysics, AS

KHVOSTIKOV, I. A. and A. M. SEMCHINOVA

Dal'nost' deystviya prozhektorov i opticheskaya neodnorodnost' atmosfery (Effective Range of Action of Searchlights and the Optic Inhomogeneousness of Atmosphere). Akademiya Nauk SSSR. Izvestiya. Seriya geogr. i geofiz., 1945, v. 9, no. 5-6, p. 425-440, diags., 5 refs. Summary in English.

AS262.A6246 v. 9



XHVOSTIKOV, I. A.

"Sodium in the Stratosphere," Usp. fiz. nauk, No.30, pp. 188-90, 1946

Translation 568494

KHVOSTIKOV, I. A.

"A Method for Determining Refraction in Precise Geodetic Measurements,"  
Dok. AN 51, No 5, 1946.

Moscow Inst. Eng. Geodesy, Air-Survey and Cartography

KHVOSTIKOV, I. A.

PA 21T114

USSR/ Physics  
Polarization  
Light-Polarization

Sep 1946

"Photographing the Tropopause in Polarized Light, " I. I. Romantsov, I. A. Khvostikov,  
Laboratory of Atmospheric Optics, Institute of Theoretical Geophysics, Academy of  
Sciences of the USSR, 3 pp

"Comptes Rendus (Doklady)" Vol LIII, No 8

A discussion is made of several investigations into the tropopause (the area between stratosphere and troposphere) which were performed by means of a powerful searchlight beam directed up 60 degree to the horizon and by a camera placed 7.6 km away. Four graphs are given, showing the dependence of brightness (degree of polarization) upon height in km above ground.

1ST AND 2ND DEPT'S										3RD AND 4TH DEPT'S																																																	
PROCESS AND PROPERTIES INDEX																																																											
551.593.5 : 533.43										1957																																																	
<p>Investigation of the atmosphere by means of a searchlight beam to altitudes of up to 35 km. <b>MURPHY, J. N. AND KINCHIN, J. A.</b> C.R. Acad. Sci. U.S.S.R. (No. 3) 225-3 (1948).—The previous "cutting" of 34 km in the investigation of the atmosphere by a searchlight beam, has been extended to 35 km by utilizing the difference in the night sky brightness in various zones of the spectrum. The range 4 500-5 500 Å is well suited for taking photographs of the beam with the night sky as background. The scattering capacity of the air at various heights was determined, there being an inversion between 25 and 30 km. Density and temperature values of the atmosphere up to altitudes of 5 km may be determined from data obtained with a searchlight beam.</p> <p style="text-align: right;">L. R. G.</p>																																																											
<i>Atmospheric optics</i>																																																											
A.S.H.-S.S.R. METALLURGICAL LITERATURE CLASSIFICATION																																																											
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1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSING AND PROPERTIES INDEX																			
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<p>352. Method for artificial illumination of the atmosphere under daylight conditions by means of a searchlight beam. <i>Shalunov, A. V., Kuznetsov, I. A., and Shalunov, I. A. C.A. Acad. Sci. USSR, 84 (No. 6) 481-4 (1964) in English.</i>—A method is suggested by means of which daylight investigation of the atmosphere may be carried out up to heights of 10-12 km. A searchlight beam, using ultraviolet rays of wavelength less than <math>0.25 \mu</math>, is employed, the daylight sky causing no interference at such wavelengths owing to the absorption of short radiation by <math>O_3</math>. For examination of the reflected and scattered light a photo-electric counter is used. The circuit details of this are given and some measurements of the intensity of scattered light at various heights are briefly reported.</p> <p style="text-align: right;">L. S. G.</p> <p style="text-align: center;"><i>Atmospheric optics</i></p>																			
ASB-55A METEOROLOGICAL LITERATURE CLASSIFICATION																			



KHVOSTIKOV, I. A. (Prof.)

"About searchlight as a tool for investigation of upper atmosphere in daylight,"  
Znaniya Sila, Moscow (July 1947)

Geophysical institute

1. KHVOSTIKOV, I. A.
2. USSR (600)
4. Physics and Mathematics
7. Spectral Reflecting Capacity of Natural Formations, Ye. L. Krinov.  
(Press of Acad Sci USSR, 1947). Reviewed by I. A. Khvostikov, Sov. Kniga,  
No. 8, 1948.
9. ~~SECRET~~ Report U-3081, 16 Jan. 1953, Unclassified.

KHVOSTIKOVA, I.A. [translator]; DOBSON, G.M.B.; BREWER, A.W.; CWILONG, B.M.,  
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Meteorology of lower atmospheric layers (From: Proc. Roy. Soc. A, 185,  
144-175, 1946; translated by I.A. Khvostikova). G.M.B. Dobson, A.W. Brewer  
B.M. Cwiling. Usp. fiz. nauk 31 no.1:96-128 '47. (MIRA 6:12)  
(Atmosphere) (Meteorology)

KHVOSTIKOV, I. A.

PA 53T39

USSR/Geophysics  
Ionosphere  
Nitrogen

Dec 1947

"Infrared Illumination of Night Skies and the Dissociation of Nitrogen in the Ionosphere," I. A. Khvostikov, 31 pp

"Uspehi Fiz Nauk" Vol XXIII, No 4

Discusses discovery of new emissions; determination of wave lengths of new emissions; atomic nitrogen; results obtained by Dufay, Bernard, and Kaplan; dissociations of Dufay and Bernard; spectrum of northern lights of low latitudes; true nature of the emissions of forbidden lines; dissociation of nitrogen in upper layers of atmosphere; degree of dissociation of nitrogen molecule in field of northern lights; emissions of atomic nitrogen; identification of infrared illumination of night skies; and band (0.0) of first positive system of nitrogen.

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